

Claims

1. A cotton bale handling method comprising:
transporting a cotton bale having a protective wrap from a harvest location to a cotton gin;
positioning the cotton bale adjacent a receiver;
separating the protective wrap from the cotton while the cotton bale is adjacent the receiver; and
transferring cotton from the bale away from the wrap into the receiver for processing by the cotton gin.
2. The method as set forth in claim 1 wherein the step of separating includes severing the protective wrap.
3. The method as set forth in claim 2 wherein the step of severing includes supporting knife structure adjacent the receiver, tensioning the wrap adjacent the knife structure, and engaging the tensioned wrap and the knife structure.
4. The method as set forth in claim 2 wherein the step of severing comprises supporting a knife adjacent an end of the receiver and moving the wrapped bale over the knife and towards a position over the receptacle so that the cotton falls from the severed wrap into the receiver.
5. The method as set forth in claim 1 further comprising the step of capturing the protective wrap and preventing the protective wrap from being deposited in the receiver.
6. The method as set forth in claim 5 wherein the step of capturing comprises positioning a wrap support in the wrapped bale prior to the step of severing.
7. The method as set forth in claim 5 wherein the step of capturing comprises capturing the protective wrap using differential air pressure.
8. The method as set forth in claim 5 further comprising transporting the protective wrap away from the receiver through an air duct.
9. The method as set forth in claim 1 including the step of positioning the wrapped bale on a conveyor to move the bale along a path towards the receiver, the step of separating including supporting wrap removal structure adjacent the conveyor.

10. The method as set forth in claim 9 wherein the step of supporting wrap removal structure comprises supporting cutting structure at a location in the path to sever the protective wrap as the bale moves adjacent the receiver.

11. Cotton handling structure comprising:
a protective wrap defining a cotton bale;
conveying structure for positioning the cotton bale relative to a cotton gin receiver;

separating structure located adjacent the receiver for removing the protective wrap from the cotton bale positioned relative to the receiver; and

wrap engaging structure located adjacent the conveying structure preventing removed wrap from being deposited in the receiver.

12. The cotton handling structure as set forth in claim 11 wherein the separating structure includes a wrap cutter engaging the protective wrap.

13. The cotton handling structure as set forth in claim 12 wherein wrap cutter includes a knife supported adjacent the receiver, the conveying structure moving the cotton bale relative to the knife to sever the wrap.

14. The cotton handling structure as set forth in claim 12 wherein receiver includes an inlet, the wrap cutter is located adjacent inlet, and the conveying structure moves the wrap against the knife and towards the inlet.

15. The cotton handling structure as set forth in claim 11 wherein the wrap engaging structure comprises a wrap support inserted into the wrapped bale.

16. The cotton handling structure as set forth in claim 15 wherein conveying structure includes a bale handler and the wrap support comprises an elongate member connected to the bale handler.

17. The cotton handling structure as set forth in claim 11 wherein wrap engaging structure includes an air duct.

18. The cotton handling structure as set forth in claim 17 further comprising a wrap processor connected to the air duct and receiving the removed wrap from the air duct.

19. The cotton handling structure as set forth in claim 11 wherein the conveying structure includes a conveyor for moving the bale along a path towards

the receiver, and the wrap engaging structure includes a knife located in the path and severing the wrap as the bale moves relative to the receiver.

20. The cotton handling structure as set forth in claim 11 wherein the conveying structure includes an adjustable bale support having opposed support members movable relative to the bale to tension the wrap engaging structure.

21. Cotton handling structure comprising:

- a protective wrap defining a wrapped cotton bale;
- conveying structure for positioning the wrapped cotton bale relative to a cotton gin receiver;
- separating structure located adjacent the receiver for removing the protective wrap from the cotton bale positioned relative to the receiver; and
- wrap removal structure preventing removed wrap from being deposited in the receiver.

22. The cotton handling structure as set forth in claim 21 wherein the conveying structure comprises a bale handler with spreadable supports, the supports movable from a narrowed bale support position for supporting the bale to a widened cotton release position for facilitating release of the cotton to the receiver.

23. The cotton handling structure as set forth in claim 22 wherein the supports are movable to tension the bale wrap, the separating structure including a cutter for severing the tensioned bale wrap.

24. The cotton handling structure as set forth in claim 21 wherein the conveying structure comprises a conveyor for receiving the cotton bale and moving the cotton bale along a path towards the receiver, and wherein the separating structure includes a cutter located in the path for severing a portion of the protective wrap and facilitating release of cotton into the receiver.

25. The cotton handling structure as set forth in claim 21 wherein the wrap removal structure comprises a source of vacuum capturing a portion of the wrap.

26. The cotton handling structure as set forth in claim 22 wherein the wrap removal structure comprises means for engaging the wrap located on the bale handler.

27. The cotton handling structure as set forth in claim 26 wherein the means for engaging the wrap comprises an elongated member located above the spreadable supports.

28. The cotton handling structure as set forth in claim 26 wherein the means for engaging the wrap comprises retractable wrap engaging members located adjacent the spreadable supports.